

ENVIRONMENTAL MONITORING REPORT

(February- 2023)

M/S. THE SANDUR MANGANESE & IRON ORES LTD.

**Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Vijayanagara District, Karnataka**

Monitoring Agency

Prepared By

M S V Analytical Laboratories

C.M.C Ward No 18 & C.T.C W.No.16

T.S No 695 / A / 32 / B1, Block No 19 (1st & 2nd Floor)

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Certified by: ISO14001: 2015, ISO 22000:2018, ISO 45001:2018, ISO 9001:2015

&

Accredited By NABL ISO/ IEC 17025:2005 Certificate No- TC 7207

&

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/598

Issue Date: 04.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 01.02.2023
- Date of Sample Receipt** : 02.02.2023
- Sample Code** : 0611
- Analysis Starting Date** : 02.02.2023
- Analysis Completion Date** : 04.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	57.7	56.1	54.2	µg / m ³	56.0	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	28.4	26.2	24.3	µg / m ³	26.3	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	11.03	9.93	9.09	µg / m ³	10.0	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	17.47	16.86	14.96	µg / m ³	16.4	80
5	Ozone as O ₃	IS 5182(part-9)	12.4	13.8	10.4	µg / m ³	12.2	100
6	Lead	IS-5182(Part22)	0.034	0.030	0.026	µg / m ³	0.0	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.42	0.38	0.30	mg / m ³	0.4	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.34	1.20	µg / m ³	1.3	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.
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(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 01.02.2023
6. Date of Sample Receipt : 02.02.2023
7. Sample Code : 0611
8. Analysis Starting Date : 02.02.2023
9. Analysis Completion Date : 04.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

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Issue Date: 04.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 01.02.2023
- Date of Sample Receipt** : 02.02.2023
- Sample Code** : 0612
- Analysis Starting Date** : 02.02.2023
- Analysis Completion Date** : 04.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	55.1	54.6	52.5	µg / m ³	53.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.9	17.2	16.3	µg / m ³	17.4	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	8.5	7.0	6.7	µg / m ³	7.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	14.63	13.5	11.07	µg / m ³	12.8	80
5	Ozone as O ₃	IS 5182(part-9)	7.9	6.5	5.8	µg / m ³	6.6	100
6	Lead	IS-5182(Part22)	0.030	0.028	0.027	µg / m ³	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.32	0.26	mg / m ³	0.30	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.34	1.30	µg / m ³	1.35	20

INFERENCE

As per NAAQS Standards

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Vysanakere, Hanumanahalli Village,
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2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 01.02.2023
6. Date of Sample Receipt : 02.02.2023
7. Sample Code : 0612
8. Analysis Starting Date : 02.02.2023
9. Analysis Completion Date : 04.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 01.02.2023
- Date of Sample Receipt** : 02.02.2023
- Sample Code** : 0613
- Analysis Starting Date** : 02.02.2023
- Analysis Completion Date** : 04.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	54.3	52.7	50.9	µg / m ³	52.6	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.7	17.5	16.8	µg / m ³	17.7	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	11.2	10.8	9.25	µg / m ³	10.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	16.7	14.2	13.8	µg / m ³	14.9	80
5	Ozone as O ₃	IS 5182(part-9)	9.5	8.1	7.5	µg / m ³	8.4	100
6	Lead	IS-5182(Part22)	0.022	0.019	0.017	µg / m ³	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.27	0.25	0.19	mg / m ³	0.23	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.35	1.26	1.21	µg / m ³	1.29	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

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Chief executive of the laboratory

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(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 01.02.2023
- Date of Sample Receipt** : 02.02.2023
- Sample Code** : 0613
- Analysis Starting Date** : 02.02.2023
- Analysis Completion Date** : 04.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

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Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/601

Issue Date: 04.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vyasnakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 01.02.2023
- Date of Sample Receipt** : 02.02.2023
- Sample Code** : 0614
- Analysis Starting Date** : 02.02.2023
- Analysis Completion Date** : 04.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	56.3	55.7	53.1	µg / m ³	55.0	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	16.2	15.8	14.2	µg / m ³	15.4	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.07	8.4	7.23	µg / m ³	8.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	12.5	11.7	9.36	µg / m ³	11.2	80
5	Ozone as O ₃	IS 5182(part-9)	8.8	9.2	7.2	µg / m ³	8.4	100
6	Lead	IS-5182(Part22)	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.29	0.32	0.26	mg / m ³	0.29	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	<0.01	<0.01	<0.01	µg / m ³	<0.01	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory
B. Chinna Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.
5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



MSV Analytical Laboratories

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C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169,

E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/601

Issue Date: 04.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 01.02.2023
6. Date of Sample Receipt : 02.02.2023
7. Sample Code : 0614
8. Analysis Starting Date : 02.02.2023
9. Analysis Completion Date : 04.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/758

Issue Date: 07.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 03.02.2023
- Date of Sample Receipt** : 04.02.2023
- Sample Code** : 0816
- Analysis Starting Date** : 04.02.2023
- Analysis Completion Date** : 07.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	57.2	56.4	55.4	µg / m ³	57.5	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	19.6	18.7	17.2.	µg / m ³	17.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.85	8.2	7.23	µg / m ³	8.6	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	16.6	15.8	14.8	µg / m ³	14.7	80
5	Ozone as O ₃	IS 5182(part-9)	9.2	8.5	7.8	µg / m ³	8.3	100
6	Lead	IS-5182(Part22)	0.028	0.025	0.022	µg / m ³	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.35	0.34	0.33	mg / m ³	0.35	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.18	1.17	1.16	µg / m ³	1.17	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/758

Issue Date: 07.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 03.02.2023
- Date of Sample Receipt** : 04.02.2023
- Sample Code** : 0816
- Analysis Starting Date** : 04.02.2023
- Analysis Completion Date** : 07.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

:- END OF REPORT :-

- Note :
- The results listed only to the tested samples & applicable parameters,
 - Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
 - This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/759

Issue Date: 07.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 03.02.2023
6. Date of Sample Receipt : 04.02.2023
7. Sample Code : 0817
8. Analysis Starting Date : 04.02.2023
9. Analysis Completion Date : 07.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	57.21	56.5	55.2	µg / m ³	56.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.2	17.4	16.8	µg / m ³	17.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.5	8.1	7.2	µg / m ³	8.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	15.2	14.3	13.2	µg / m ³	14.2	80
5	Ozone as O ₃	IS 5182(part-9)	10.7	9.5	8.5	µg / m ³	9.6	100
6	Lead	IS-5182(Part22)	0.021	0.02	0.018	µg / m ³	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.32	0.3	0.29	mg / m ³	0.30	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.19	1.18	µg / m ³	1.20	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Channa Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/759

Issue Date: 07.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasankere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 03.02.2023
6. Date of Sample Receipt : 04.02.2023
7. Sample Code : 0817
8. Analysis Starting Date : 04.02.2023
9. Analysis Completion Date : 07.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinga Lingana Gouda
Chief executive of the laboratory

- Note :
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/760

Issue Date: 07.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 03.02.2023
- Date of Sample Receipt** : 04.02.2023
- Sample Code** : 0818
- Analysis Starting Date** : 04.02.2023
- Analysis Completion Date** : 07.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	52.1	51.4	50.6	µg / m ³	51.4	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	14.2	13.6	12.2	µg / m ³	13.3	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	7.2	6.1	5.3	µg / m ³	6.20	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	13.8	12.4	11.3	µg / m ³	12.50	80
5	Ozone as O ₃	IS 5182(part-9)	0.25	0.24	0.23	µg / m ³	0.24	100
6	Lead	IS-5182(Part22)	0.026	0.024	0.022	µg / m ³	0.024	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.18	0.17	0.16	mg / m ³	0.17	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.22	1.21	1.20	µg / m ³	1.21	20

INFERENCE

As per NAAQS Standards
Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Channa Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/760

Issue Date: 07.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 03.02.2023
6. Date of Sample Receipt : 04.02.2023
7. Sample Code : 0818
8. Analysis Starting Date : 04.02.2023
9. Analysis Completion Date : 07.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will be destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/761

Issue Date: 07.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 03.02.2023
- Date of Sample Receipt** : 04.02.2023
- Sample Code** : 0819
- Analysis Starting Date** : 04.02.2023
- Analysis Completion Date** : 07.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	56.2	55.3	53.5	µg / m ³	55.0	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	14.5	13.5	12.7	µg / m ³	13.6	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	7.9	6.7	5.4	µg / m ³	6.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	13.6	12.1	11.5	µg / m ³	12.4	80
5	Ozone as O ₃	IS 5182(part-9)	6.2	5.4	4.2	µg / m ³	5.3	100
6	Lead	IS-5182(Part22)	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.26	0.24	mg / m ³	0.26	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	<0.01	<0.01	<0.01	µg / m ³	<0.01	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,

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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,

E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/761

Issue Date: 07.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 03.02.2023
- Date of Sample Receipt** : 04.02.2023
- Sample Code** : 0819
- Analysis Starting Date** : 04.02.2023
- Analysis Completion Date** : 07.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

3

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1364

Issue Date: 12.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 08.02.2023
- Date of Sample Receipt** : 10.02.2023
- Sample Code** : 1493
- Analysis Starting Date** : 10.02.2023
- Analysis Completion Date** : 12.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	52.1	53.2	50.5	µg / m ³	51.9	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	21.8	22.1	20.4	µg / m ³	21.4	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.5	11.1	8.9	µg / m ³	9.8	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	18.15	19.7	17.8	µg / m ³	18.6	80
5	Ozone as O ₃	IS 5182(part-9)	9.2	10.1	8.9	µg / m ³	9.4	100
6	Lead	IS-5182(Part22)	0.03	0.029	0.028	µg / m ³	0.029	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.41	0.43	0.4	mg / m ³	0.41	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.10	1.9	1.8	µg / m ³	1.60	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



:- END OF REPORT

Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1364

Issue Date: 12.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 08.02.2023
- Date of Sample Receipt** : 10.02.2023
- Sample Code** : 1493
- Analysis Starting Date** : 10.02.2023
- Analysis Completion Date** : 12.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Channa Lingana Gouda
Chief executive of the laboratory

- Note:
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1365

Issue Date: 12.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 08.02.2023
- Date of Sample Receipt** : 10.02.2023
- Sample Code** : 1494
- Analysis Starting Date** : 10.02.2023
- Analysis Completion Date** : 12.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	57.4	58.7	56.2	µg / m ³	57.4	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	20.2	21.8	19.4	µg / m ³	20.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.1	10.7	8.9	µg / m ³	9.6	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	13.3	14.8	12.6	µg / m ³	13.6	80
5	Ozone as O ₃	IS 5182(part-9)	8.6	9.2	7.7	µg / m ³	8.5	100
6	Lead	IS-5182(Part22)	0.032	0.033	0.031	µg / m ³	0.032	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.29	0.30	0.28	mg / m ³	0.29	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.11	1.10	1.9	µg / m ³	1.37	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



:- END OF REPORT :-

Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1365

Issue Date: 12.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 08.02.2023
- Date of Sample Receipt** : 10.02.2023
- Sample Code** : 1494
- Analysis Starting Date** : 10.02.2023
- Analysis Completion Date** : 12.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1366

Issue Date: 12.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 08.02.2023
- Date of Sample Receipt** : 10.02.2023
- Sample Code** : 1495
- Analysis Starting Date** : 10.02.2023
- Analysis Completion Date** : 12.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	51.9	52.5	50.2	µg / m ³	51.5	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	16.5	17.1	15.8	µg / m ³	16.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	7.5	8.8	6.9	µg / m ³	7.73	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	12.1	13.5	11.3	µg / m ³	12.3	80
5	Ozone as O ₃	IS 5182(part-9)	6.7	7.8	5.4	µg / m ³	6.63	100
6	Lead	IS-5182(Part22)	0.090	0.088	0.086	µg / m ³	0.09	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.25	0.23	mg / m ³	0.24	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.17	1.19	1.16	µg / m ³	1.17	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Chinnna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1366

Issue Date: 12.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-13 1
- Date of Sampling** : 08.02.2023
- Date of Sample Receipt** : 10.02.2023
- Sample Code** : 1495
- Analysis Starting Date** : 10.02.2023
- Analysis Completion Date** : 12.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

:- END OF REPORT:-

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1367

Issue Date: 12.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 08.02.2023
6. Date of Sample Receipt : 10.02.2023
7. Sample Code : 1496
8. Analysis Starting Date : 10.02.2023
9. Analysis Completion Date : 12.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	58.2	57.1	56.4	µg / m ³	57.2	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.2	17.8	16.4	µg / m ³	17.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	8.5	7.5	6.6	µg / m ³	7.5	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	11.2	10.7	9.9	µg / m ³	10.6	80
5	Ozone as O ₃	IS 5182(part-9)	9.1	8.3	7.9	µg / m ³	8.4	100
6	Lead	IS-5182(Part22)	0.018	0.017	0.016	µg / m ³	0.017	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.23	0.24	0.22	mg / m ³	0.23	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.24	1.23	1.22	µg / m ³	1.23	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Chinnna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
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MSV Analytical Laboratories

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(Certified by ISO-14001-2015, ISO 22000-2018, ISO 45001-2018, ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)
Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,
E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1367

Issue Date: 12.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 08.02.2023
6. Date of Sample Receipt : 10.02.2023
7. Sample Code : 1496
8. Analysis Starting Date : 10.02.2023
9. Analysis Completion Date : 12.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinha Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.
5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1602

Issue Date: 14.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 11.02.2023
- Date of Sample Receipt** : 12.02.2023
- Sample Code** : 1756
- Analysis Starting Date** : 12.02.2023
- Analysis Completion Date** : 14.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	58.6	59.8	57.5	µg / m ³	58.6	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	23.8	24.3	22.9	µg / m ³	23.7	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	8.8	9.85	7.45	µg / m ³	8.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	18.3	19.25	17.1	µg / m ³	18.2	80
5	Ozone as O ₃	IS 5182(part-9)	9.2	8.1	7.9	µg / m ³	8.4	100
6	Lead	IS-5182(Part22)	0.027	0.025	0.022	µg / m ³	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.39	0.41	0.38	mg / m ³	0.39	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.6	1.5	1.4	µg / m ³	1.50	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B.Chinpa Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1602

Issue Date: 14.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 11.02.2023
6. Date of Sample Receipt : 12.02.2023
7. Sample Code : 1756
8. Analysis Starting Date : 12.02.2023
9. Analysis Completion Date : 14.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1603

Issue Date: 14.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vyasnakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 11.02.2023
- Date of Sample Receipt** : 12.02.2023
- Sample Code** : 1757
- Analysis Starting Date** : 12.02.2023
- Analysis Completion Date** : 14.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	55.4	56.8	54.3	µg / m ³	55.5	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	20.1	21.1	19.7	µg / m ³	20.3	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	8.5	9.8	7.8	µg / m ³	8.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	12.3	13.6	11.7	µg / m ³	12.5	80
5	Ozone as O ₃	IS 5182(part-9)	8.2	7.5	6.8	µg / m ³	7.50	100
6	Lead	IS-5182(Part22)	0.031	0.03	0.029	µg / m ³	0.030	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.27	0.28	0.26	mg / m ³	0.27	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.82	1.8	1.78	µg / m ³	1.80	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1603

Issue Date: 14.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 11.02.2023
- Date of Sample Receipt** : 12.02.2023
- Sample Code** : 1757
- Analysis Starting Date** : 12.02.2023
- Analysis Completion Date** : 14.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinnna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1604

Issue Date: 14.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vysanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 11.02.2023
- Date of Sample Receipt** : 12.02.2023
- Sample Code** : 1758
- Analysis Starting Date** : 12.02.2023
- Analysis Completion Date** : 14.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	51.2	52.6	49.5	µg / m ³	51.1	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	16.8	17.5	15.1	µg / m ³	16.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	8.2	7.5	6.4	µg / m ³	7.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	12.21	13.25	11.15	µg / m ³	12.2	80
5	Ozone as O ₃	IS 5182(part-9)	3.7	3.4	3.1	µg / m ³	3.40	100
6	Lead	IS-5182(Part22)	0.084	0.083	0.082	µg / m ³	0.083	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.22	0.20	mg / m ³	0.22	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	1.14	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.16	1.14	1.12	µg / m ³	1.16	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1604

Issue Date: 14.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 11.02.2023
6. Date of Sample Receipt : 12.02.2023
7. Sample Code : 1758
8. Analysis Starting Date : 12.02.2023
9. Analysis Completion Date : 14.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1605

Issue Date: 14.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 11.02.2023
- Date of Sample Receipt** : 12.02.2023
- Sample Code** : 1759
- Analysis Starting Date** : 12.02.2023
- Analysis Completion Date** : 14.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	53.8	52.1	51.1	µg / m ³	52.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	15.4	14.3	13.1	µg / m ³	14.2	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	6.65	6.2	4.25	µg / m ³	5.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	10	8.8	8.15	µg / m ³	8.9	80
5	Ozone as O ₃	IS 5182(part-9)	7.1	6.9	5.1	µg / m ³	6.3	100
6	Lead	IS-5182(Part22)	0.013	0.012	0.011	µg / m ³	0.012	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.20	0.21	0.22	mg / m ³	0.21	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.19	1.18	µg / m ³	1.19	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1605

Issue Date: 14.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 11.02.2023
- Date of Sample Receipt** : 12.02.2023
- Sample Code** : 1759
- Analysis Starting Date** : 12.02.2023
- Analysis Completion Date** : 14.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.
5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



MSV Analytical Laboratories

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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,
E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

5

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1793

Issue Date: 17.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 14.02.2023
- Date of Sample Receipt** : 15.02.2023
- Sample Code** : 1972
- Analysis Starting Date** : 15.02.2023
- Analysis Completion Date** : 17.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	59.2	58.5	57.2	µg / m ³	58.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	21.3	22.2	20.2	µg / m ³	21.2	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	17.0	18.0	16.9	µg / m ³	17.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	19.6	20.8	18.7	µg / m ³	19.7	80
5	Ozone as O ₃	IS 5182(part-9)	8.4	9.3	7.8	µg / m ³	8.50	100
6	Lead	IS-5182(Part22)	0.032	0.036	0.029	µg / m ³	0.032	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	<0.01	<0.01	<0.01	mg / m ³	<0.01	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	1.26	1.28 µg	1.24	µg / m ³	1.26	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.82	1.80	1.78	µg / m ³	1.80	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory



- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1793

Issue Date: 17.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 14.02.2023
- Date of Sample Receipt** : 15.02.2023
- Sample Code** : 1972
- Analysis Starting Date** : 15.02.2023
- Analysis Completion Date** : 17.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B.ChinHa Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1794

Issue Date: 17.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vysanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 14.02.2023
- Date of Sample Receipt** : 15.02.2023
- Sample Code** : 1973
- Analysis Starting Date** : 15.02.2023
- Analysis Completion Date** : 17.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	54.2	55.2	53.8	µg / m ³	54.4	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.8	19.3	17.2	µg / m ³	18.4	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	11.9	12.9	10.9	µg / m ³	11.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	16.20	17.80	15.70	µg / m ³	16.5	80
5	Ozone as O ₃	IS 5182(part-9)	8.10	9.40	7.30	µg / m ³	8.2	100
6	Lead	IS-5182(Part22)	1.16	1.18	1.15	µg / m ³	1.16	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.34	0.35	0.32	mg / m ³	0.34	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.41	1.36	1.28	µg / m ³	1.35	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Chihna Lingana Gouda
Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,

2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1794

Issue Date: 17.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 14.02.2023
- Date of Sample Receipt** : 15.02.2023
- Sample Code** : 1973
- Analysis Starting Date** : 15.02.2023
- Analysis Completion Date** : 17.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B.Chintha Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1795

Issue Date: 17.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 14.02.2023
- Date of Sample Receipt** : 15.02.2023
- Sample Code** : 1974
- Analysis Starting Date** : 15.02.2023
- Analysis Completion Date** : 17.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	55.8	54.1	53.4	µg / m ³	54.4	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.10	17.40	15.70	µg / m ³	17.0	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.20	8.50	7.60	µg / m ³	8.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	14.80	13.70	12.65	µg / m ³	13.7	80
5	Ozone as O ₃	IS 5182(part-9)	8.70	7.50	7.90	µg / m ³	8.03	100
6	Lead	IS-5182(Part22)	0.028	0.024	0.022	µg / m ³	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.24	0.2	mg / m ³	0.24	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³		400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.3	1.28	1.26	µg / m ³	1.28	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B. Channa Lingana Gouda
Chief executive of the laboratory

- Note:
- The results listed only to the tested samples & applicable parameters,
 - Water samples will be destroyed after 10 days, Filter papers & Thimbles will be destroyed 3 months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1795

Issue Date: 17.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 14.02.2023
- Date of Sample Receipt** : 15.02.2023
- Sample Code** : 1974
- Analysis Starting Date** : 15.02.2023
- Analysis Completion Date** : 17.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note:
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 - Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1796

Issue Date: 17.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 14.02.2023
- Date of Sample Receipt** : 15.02.2023
- Sample Code** : 1975
- Analysis Starting Date** : 15.02.2023
- Analysis Completion Date** : 17.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	54.2	53.2	52.2	µg / m ³	53.20	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	16.3	15.2	14.2	µg / m ³	15.23	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.0	8.4	7.1	µg / m ³	8.17	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	18.0	16.7	15.65	µg / m ³	16.78	80
5	Ozone as O ₃	IS 5182(part-9)	7.8	6.2	5.8	µg / m ³	6.60	100
6	Lead	IS-5182(Part22)	1.41	1.36	1.28	µg / m ³	1.350	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.29	0.26	0.24	mg / m ³	0.26	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.24	1.20	ng / m ³	1.24	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1796

Issue Date: 17.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Gunda Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 14.02.2023
6. Date of Sample Receipt : 15.02.2023
7. Sample Code : 1975
8. Analysis Starting Date : 15.02.2023
9. Analysis Completion Date : 17.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B.Chinfa Lingana Gouda
Chief executive of the laboratory

- Note:
1. The results listed only to the tested samples & applicable parameters,
 2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
 3. This report is not to be reproduced wholly or in part & cannot be used as evidence in the court of law & should not be used in any advertising media without our special permission in writing.
 4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.
 5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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(Certified by ISO-14001-2015, ISO 22000-2018, ISO 45001-2018, ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,

E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1928

Issue Date: 20.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 16.02.2023
- Date of Sample Receipt** : 17.02.2023
- Sample Code** : 2141
- Analysis Starting Date** : 17.02.2023
- Analysis Completion Date** : 20.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	52.4	53.5	51.3	µg / m ³	52.4	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	22.8	23.6	21.5	µg / m ³	22.6	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.8	10.9	8.4	µg / m ³	9.7	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	17.7	18.6	16.2	µg / m ³	17.5	80
5	Ozone as O ₃	IS 5182(part-9)	10.6	11.4	10.1	µg / m ³	10.7	100
6	Lead	IS-5182(Part22)	0.026	0.028	0.024	µg / m ³	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.37	0.38	0.36	mg / m ³	0.37	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.26	1.28	1.25 µg	µg / m ³	1.24	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

Page:1

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1928

Issue Date: 20.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 16.02.2023
- Date of Sample Receipt** : 17.02.2023
- Sample Code** : 2141
- Analysis Starting Date** : 17.02.2023
- Analysis Completion Date** : 20.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

Page:2

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1929

Issue Date: 20.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 16.02.2023
- Date of Sample Receipt** : 17.02.2023
- Sample Code** : 2142
- Analysis Starting Date** : 17.02.2023
- Analysis Completion Date** : 20.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	55.6	56.7	54.2	µg / m ³	55.5	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	18.8	19.9	17.6	µg / m ³	18.7	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	10.06	10.26	9.19	µg / m ³	9.84	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	17.57	19.26	9.19	µg / m ³	15.3	80
5	Ozone as O ₃	IS 5182(part-9)	10.7	9.4	8.4	µg / m ³	9.50	100
6	Lead	IS-5182(Part22)	0.026	0.030	0.020	µg / m ³	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.26	0.32	0.24	mg / m ³	0.27	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.24	1.20	µg / m ³	1.24	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

Page:1

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1929

Issue Date: 20.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 16.02.2023
6. Date of Sample Receipt : 17.02.2023
7. Sample Code : 2142
8. Analysis Starting Date : 17.02.2023
9. Analysis Completion Date : 20.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1929

Issue Date: 20.02.2023

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(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 16.02.2023
6. Date of Sample Receipt : 17.02.2023
7. Sample Code : 2143
8. Analysis Starting Date : 17.02.2023
9. Analysis Completion Date : 20.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	58.6	57.1	56.2	µg / m ³	57.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	22.6	21.0	20.1	µg / m ³	21.2	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.04	7.82	7.01	µg / m ³	7.9	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	16.76	16.06	15.41	µg / m ³	16.0	80
5	Ozone as O ₃	IS 5182(part-9)	8.8	9.2	7.6	µg / m ³	8.5	100
6	Lead	IS-5182(Part22)	0.029	0.026	0.024	µg / m ³	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.32	0.24	mg / m ³	0.28	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.27	1.29	1.25	µg / m ³	1.27	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Channa Lingana Gouda
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1930

Issue Date: 20.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 16.02.2023
6. Date of Sample Receipt : 17.02.2023
7. Sample Code : 2143
8. Analysis Starting Date : 17.02.2023
9. Analysis Completion Date : 20.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1931

Issue Date: 20.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd. (Metal & Ferro Alloys Plant) Vyasanakere, Hanumanahalli Village, Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 16.02.2023
- Date of Sample Receipt** : 17.02.2023
- Sample Code** : 2144
- Analysis Starting Date** : 17.02.2023
- Analysis Completion Date** : 20.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	59.3	58.7	57.1	µg / m ³	58.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	23.4	22.5	21.2	µg / m ³	22.3	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.19	8.54	7.15	µg / m ³	8.2	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	16.11	14.26	14.20	µg / m ³	14.8	80
5	Ozone as O ₃	IS 5182(part-9)	8.8	8.0	6.8	µg / m ³	7.8	100
6	Lead	IS-5182(Part22)	0.030	0.028	0.026	µg / m ³	0.028	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.34	0.30	mg / m ³	0.31	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.26	1.24	µg / m ³	1.26	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



---END OF REPORT---

Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/1931

Issue Date: 20.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 16.02.2023
- Date of Sample Receipt** : 17.02.2023
- Sample Code** : 2144
- Analysis Starting Date** : 17.02.2023
- Analysis Completion Date** : 20.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B.Channa Lingana Gouda
Chief executive of the laboratory

Page:2

- Note : 1. The results listed only to the tested samples & applicable parameters,
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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (0) : 08392-255169,

E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2533

Issue Date: 23.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 20.02.2023
6. Date of Sample Receipt : 21.02.2023
7. Sample Code : 2714
8. Analysis Starting Date : 21.02.2023
9. Analysis Completion Date : 23.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	58.4	59.2	57.4	µg / m ³	58.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	21.1	22.8	20.5	µg / m ³	21.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	10.5	11.8	9.5	µg / m ³	10.6	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	19.2	20.6	18.3	µg / m ³	19.4	80
5	Ozone as O ₃	IS 5182(part-9)	<0.01	<0.01	<0.01	µg / m ³	<0.01	100
6	Lead	IS-5182(Part22)	0.080	0.081	0.079	µg / m ³	0.080	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.26	mg / m ³	0.28	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.21	1.19	µg / m ³	1.20	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

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E-mail : msvallbellary2018@gmail.com, labmsv@gmail.com Website : www.msvallbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2533

Issue Date: 23.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Smiore Colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 20.02.2023
6. Date of Sample Receipt : 21.02.2023
7. Sample Code : 2714
8. Analysis Starting Date : 21.02.2023
9. Analysis Completion Date : 23.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B.Chinnna Lingana Gouda
Chief executive of the laboratory

- Note :
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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2534

Issue Date: 23.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 20.02.2023
- Date of Sample Receipt** : 21.02.2023
- Sample Code** : 2715
- Analysis Starting Date** : 21.02.2023
- Analysis Completion Date** : 23.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	53.5	54.8	52.3	µg / m ³	53.5	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	17.2	18.6	16.4	µg / m ³	17.4	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	7.55	8.15	6.75	µg / m ³	7.5	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	14.6	15.2	13.8	µg / m ³	14.5	80
5	Ozone as O ₃	IS 5182(part-9)	8.2	9.4	7.0	µg / m ³	8.2	100
6	Lead	IS-5182(Part22)	0.030	0.031	0.029	µg / m ³	0.030	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.23	0.24	0.22	mg / m ³	0.23	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.12	1.13	1.10	ng / m ³	1.12	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Chinnna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2534

Issue Date: 23.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasankere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 20.02.2023
6. Date of Sample Receipt : 21.02.2023
7. Sample Code : 2715
8. Analysis Starting Date : 21.02.2023
9. Analysis Completion Date : 23.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2535

Issue Date: 23.02.2023

1. Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the location : Vysanakere Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
5. Date of Sampling : 20.02.2023
6. Date of Sample Receipt : 21.02.2023
7. Sample Code : 2716
8. Analysis Starting Date : 21.02.2023
9. Analysis Completion Date : 23.02.2023
10. Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	55.2	54.1	53.7	µg / m ³	54.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	16.2	15.5	14.9	µg / m ³	15.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	8.05	7.75	6.5	µg / m ³	7.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	13.3	12.6	11.2	µg / m ³	12.3	80
5	Ozone as O ₃	IS 5182(part-9)	6.2	6.0	5.9	µg / m ³	6.0	100
6	Lead	IS-5182(Part22)	0.022	0.021	0.020	µg / m ³	0.020	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.38	0.37	0.36	mg / m ³	0.37	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.36	1.35	1.33	ng / m ³	1.35	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
-----------	---

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2535

Issue Date: 23.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 20.02.2023
- Date of Sample Receipt** : 21.02.2023
- Sample Code** : 2716
- Analysis Starting Date** : 21.02.2023
- Analysis Completion Date** : 23.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2536

Issue Date: 23.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 20.02.2023
- Date of Sample Receipt** : 21.02.2023
- Sample Code** : 2717
- Analysis Starting Date** : 21.02.2023
- Analysis Completion Date** : 23.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	54.9	55.5	53.2	µg / m ³	54.5	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	20.1	21.4	19.5	µg / m ³	20.3	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	7.5	8.7	6.5	µg / m ³	7.5	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	15.85	16.4	14.8	µg / m ³	15.6	80
5	Ozone as O ₃	IS 5182(part-9)	8.2	8.4	8.0	µg / m ³	8.2	100
6	Lead	IS-5182(Part22)	0.020	0.021	0.022	µg / m ³	0.021	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.22	0.24	0.20	mg / m ³	0.22	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.20	1.21	1.22	µg / m ³	1.21	20

INFERENCE

As per NAAQS Standards

Report Status :- The analyzed values for above measured parameter are within the limits

Analysed by



Authorized Signatory

B. Chinnna Lingana Gouda
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters,

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/2536

Issue Date: 23.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 20.02.2023
- Date of Sample Receipt** : 21.02.2023
- Sample Code** : 2717
- Analysis Starting Date** : 21.02.2023
- Analysis Completion Date** : 23.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

B.Chintha Lingana Gouda
Chief executive of the laboratory

- Note :
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 - Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.
 - Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



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Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,
E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvbellary.com

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00973

Issue Date: 27.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 24.02.2023
- Date of Sample Receipt** : 25.02.2023
- Sample Code** : 2474
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	52.0	53.6	51.0	µg / m ³	52.2	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	24.8	25.4	23.2	µg / m ³	24.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	10.45	11.15	9.55	µg / m ³	10.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	18.8	19.4	17.4	µg / m ³	18.5	80
5	Ozone as O ₃	IS 5182(part-9)	11.4	12.6	10.2	µg / m ³	11.4	100
6	Lead	IS-5182(Part22)	0.025	0.026	0.024	µg / m ³	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.26	0.22	mg / m ³	0.24	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.34	1.33	1.32	µg / m ³	1.33	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note : 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00973

Issue Date: 27.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Smiore Colony
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 24.02.2023
- Date of Sample Receipt** : 25.02.2023
- Sample Code** : 2474
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



:- END OF REPORT:-

Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00974

Issue Date: 27.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 24.02.2023
- Date of Sample Receipt** : 25.02.2023
- Sample Code** : 2475
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	54.1	55.6	53.2	µg / m ³	54.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	17.6	18.8	16.6	µg / m ³	17.7	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	7.75	8.1	6.75	µg / m ³	7.5	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	18.2	20.5	17.35	µg / m ³	18.7	80
5	Ozone as O ₃	IS 5182(part-9)	8.4	8.6	7.2	µg / m ³	8.1	100
6	Lead	IS-5182(Part22)	0.026	0.027	0.025	µg / m ³	0.026	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.30	0.32	0.28	mg / m ³	0.30	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.28	1.29	1.27	µg / m ³	1.28	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B. Chinna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00974

Issue Date: 27.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Kallahalli Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 24.02.2023
- Date of Sample Receipt** : 25.02.2023
- Sample Code** : 2475
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00975

Issue Date: 27.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vysanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 24.02.2023
- Date of Sample Receipt** : 25.02.2023
- Sample Code** : 2476
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	59.5	58.6	57.2	µg / m ³	58.4	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	23.8	22.4	21.8	µg / m ³	22.7	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.45	8.1	7.45	µg / m ³	8.3	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	17.6	16.25	15.8	µg / m ³	16.6	80
5	Ozone as O ₃	IS 5182(part-9)	8.9	8.8	8.4	µg / m ³	8.7	100
6	Lead	IS-5182(Part22)	0.026	0.025	0.024	µg / m ³	0.025	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.24	0.23	0.22	mg / m ³	0.24	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.37	1.36	1.35	µg / m ³	1.36	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by

:- END OF REPORT :-



Authorized Signatory

B. Chinnna Lingana Gouda
Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00975

Issue Date: 27.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Vyasanakere Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 24.02.2023
- Date of Sample Receipt** : 25.02.2023
- Sample Code** : 2476
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by



Authorized Signatory

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Chief executive of the laboratory

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MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00976

Issue Date: 27.02.2023

- Name of the Project** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location** : Gunda Village
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of the sample** : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling** : 24.02.2023
- Date of Sample Receipt** : 25.02.2023
- Sample Code** : 2477
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
1	Particulate Matter PM ₁₀	IS-5182(Part-23)	59.2	58.6	57.2	µg / m ³	58.3	100
2	Particulate Matter or PM _{2.5}	LAB SOP MSVAL/SOP/A/005	23.5	22.8	21.2	µg / m ³	22.5	60
3	Sulphur Dioxide as SO ₂	IS-5182(Part-2)	9.45	8.8	7.2	µg / m ³	8.4	80
4	Oxides of Nitrogen as NO _x	IS-5182(Part-6)	17.95	16.55	15.6	µg / m ³	16.7	80
5	Ozone as O ₃	IS 5182(part-9)	<0.01	<0.01	<0.01	µg / m ³	<0.01	100
6	Lead	IS-5182(Part22)	0.025	0.024	0.023	µg / m ³	0.024	1
7	Carbon Monoxide as CO	LAB SOP MSVAL/SOP/A/007	0.28	0.30	0.26	mg / m ³	0.28	2
8	Ammonia as NH ₃	LAB SOP MSVAL/SOP/A/006	<0.01	<0.01	<0.01	µg / m ³	<0.01	400
9	Nickel as Ni	LAB SOP MSVAL/SOP/A/008	1.24	1.23	1.22	µg / m ³	1.23	20

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
------------------	---

Analysed by

:- END OF REPORT :-



Authorized Signatory

B. Chhina Lingana Gouda
Chief executive of the laboratory

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E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvalbellary.com

MSVAL/A/F/16/03

ANALYSIS REPORT OF AMBIENT AIR QUALITY

Test Report No: MSVAL/2023/00976

Issue Date: 27.02.2023

- Name of the Project : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Name of the location : Gunda Village
- Sample Collected By : MSV Analytical Laboratories, Bellary.
- Particulars of the sample : Sample collected with RDS APM460 and FDS GTI-131
- Date of Sampling : 24.02.2023
- Date of Sample Receipt : 25.02.2023
- Sample Code : 2477
- Analysis Starting Date : 25.02.2023
- Analysis Completion Date : 27.02.2023
- Sample Tested as Received

S.No	Parameter	Protocols	Shift wise results			Units	Result in Avg.	Tolerance limits
			1	2	3			
10	Benzene as C ₆ H ₆	IS:5182(part 11)	<0.01	<0.01	<0.01	µg / m ³	<0.01	5
11	Benzo (α) Pyrene (BaP)	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	1
12	Arsenic as As	CPCB Procedure	<0.01	<0.01	<0.01	µg / m ³	<0.01	6

INFERENCE	As per NAAQS Standards Report Status :- The analyzed values for above measured parameter are within the limits
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No:MSVAL/2023/2537

Report Issued Date : 23.02.2023

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID** : Coke Screening & Store
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected** : Sample collected with VSS - 1
- Date of Sample Receipt** : 20.02.2023
- Sample Code** : 2718
- Analysis Starting Date** : 21.02.2023
- Analysis Completion Date** : 23.02.2023
- Sample Tested as Received**

GENERAL DETAILS

Date of Monitoring	24.02.2023
Fuel Used	---
Stack Temperature (°C)	41
Velocity (m/s)	6.2
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m ²)	0.38465

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	30.4	50

INFERENCE	As per GSR 277 (E) Standards. Report Status :- The analyzed value for above measured parameter is within the limits.
------------------	---

Analysed by



--: END OF REPORT:--

Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
2. Water samples will destroyed after 10days, Filter papers & Thimbles will be destroyed 3months from the date of issue of test certificate unless otherwise specified. ILC sample will be destroyed after 1 month from the date of test certificate issue.
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MSV Analytical Laboratories

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(Certified by ISO-14001-2015, ISO 22000-2018, ISO 45001-2018, ISO 9001-2015)

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/2538

Report Issued Date: 23.02.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Cutter
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 20.02.2023
6. Sample Code : 2718
7. Analysis Starting Date : 21.02.2023
8. Analysis Completion Date : 23.02.2023
9. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	24.02.2023
Fuel Used	---
Stack Temperature (°C)	41
Velocity (m/s)	4.2
Height (m)	15mtrs AGL
Diameter (m)	0.7
Cross sectional area (m ²)	0.38465

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	31.2	50

INFERENCE	As per KSPCB Standards Report Status :- The analyzed value for above measured parameter is within the limits.
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Analysed by

Authorized Signatory

B.Chinna Lingaha Gouda

Chief executive of the laboratory



---: END OF REPORT:---

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/2539

Report Issued Date : 23.02.2023

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID** : Coal Crushing Area
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected** : Sample collected with VSS - 1
- Date of Sample Receipt** : 20.02.2023
- Sample Code** : 2718
- Analysis Starting Date** : 21.02.2023
- Analysis Completion Date** : 23.02.2023
- Sample Tested as Received**

GENERAL DETAILS

Date of Monitoring	20.02.2023
Fuel Used	---
Stack Temperature (°C)	30
Velocity (m/s)	5.4
Height (m)	15mtrs AGL
Diameter (m)	0.75
Cross sectional area (m ²)	0.44156

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	28	50

INFERENCE	As per KSPCB Standards Report Status :- The analyzed value for above measured parameter is within the limits.
------------------	--

Analysed by

Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory



Note: 1. The results listed only to the tested samples & applicable parameters,

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: TC720722000022294F

Report Issued Date: 23.02.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : DG Set 750 KVA
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 20.02.2023
6. Sample Code : 3069
7. Analysis Starting Date : 21.02.2023
8. Analysis Completion Date : 23.02.2023
9. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	20.02.2023
Fuel Used	Diesel
Stack Temperature (°C)	106
Velocity (m/s)	6.44
Height (m)	15mtrs AGL
Diameter (m)	0.3
Cross sectional area (m ²)	0.07065

RESULTS

Parameters	Protocol	Unit	Result	KSPCB Consent Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	23.3	100
Sulphur dioxide	IS-11255(Part2) - 1985	PPM	20.6	50
Nitrogen dioxide	IS-11255(Part7) - 2005	PPM	18.4	50

INFERENCE	As per KSPCB Consent Standards. Report Status :- The analyzed value for above measured parameter is within the limits.
-----------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvlabellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/2559

Report Issued Date: 27.02.2023

- Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID : Ferro Alloy Arc Furnace 5
- Sample Collected By : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected : Sample collected with VSS - 1
- Date of Sample Receipt : 24.02.2023
- Sample Code : 2905
- Analysis Starting Date : 25.02.2023
- Analysis Completion Date : 27.02.2023
- Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	24.02.2023
Fuel Used	----
Stack Temperature (°C)	40
Velocity (m/s)	6.56
Height (m)	35 mtrs AGL
Diameter (m)	2.5
Cross sectional area (m ²)	4.90625
Flow/Discharge Rate of Gas Nm ³ /Hr	120811.5

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	31.8	150
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	20.2	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	32.5	500
Carbon Monoxide as(CO)	IS 13270	%	0.32	Max 1%
Oxygen as O ₂	Instrument Method	%	5.2	---

INFERENCE	As per GSR 277 (E) Standards. Report Status :- The analyzed value for above measured parameter is within the limits.
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters, -: END OF REPORT:-
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E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/2560

Report Issued Date: 27.02.2023

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID** : Ferro Alloy Arc Furnace 3
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected** : Sample collected with VSS - 1
- Date of Sample Receipt** : 24.02.2023
- Sample Code** : 2906
- Analysis Starting Date** : 25.02.2023
- Analysis Completion Date** : 27.02.2023
- Sample Tested as Received**

GENERAL DETAILS

Date of Monitoring	24.02.2023
Fuel Used	----
Stack Temperature (°C)	45
Velocity (m/s)	6.01
Height (m)	35 mtrs AGL
Diameter (m)	2.5
Cross sectional area (m ²)	4.90625
Flow/Discharge Rate of Gas Nm ³ /Hr	108094.5

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	32.5	150
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	22.25	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	36.5	500
Carbon Monoxide as(CO)	IS 13270	%	0.28	Max 1%
Oxygen as O ₂	Instrument Method	%	5.50	---

INFERENCE	As per GSR 277 (E) Standards. Report Status :- The analyzed value for above measured parameter is within the limits.
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Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvalbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No:MSVAL/2023/2707

Report Issued Date : 02.03.2023

- Name of the Industry** : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- Stack ID** : Coke Oven Battery - Passes Through WHRB-1
- Sample Collected By** : MSV Analytical Laboratories, Bellary.
- Particulars of Sample Collected** : Sample collected with VSS - 1
- Date of Sample Receipt** : 27.02.2023
- Sample Code** : 3067
- Analysis Starting Date** : 28.02.2023
- Analysis Completion Date** : 02.03.2023
- Sample Tested as Received**

GENERAL DETAILS

Date of Monitoring	27.02.2023
Fuel Used	----
Stack Temperature (°C)	120
Velocity (m/s)	6.61
Height (m)	60 mtrs AGL
Diameter (m)	4.6
Cross sectional area (m ²)	16.61
Flow/Discharge Rate of Gas Nm ³ /Hr	275061.6

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	25.0	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	22.1	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	56.8	500
Carbon Monoxide as(CO)	IS 13270	%	0.24	Max 1%
Oxygen as O2	Instrument Method	%	5.20	---

INFERENCE	As per GSR 277 (E) Standards. Report Status :- The analyzed value for above measured parameter is within the limits.
------------------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters, - : END OF REPORT:-
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E-mail : msv.lab01@gmail.com, labmsv@gmail.com, Website : www.msvbellary.com

MSVAL/A/F/18/03

ANALYSIS REPORT FOR SOURCE EMISSION

Test Report No: MSVAL/2023/2708

Report Issued Date : 02.03.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Stack ID : Coke Oven Battery - Passes Through WHRB-2
3. Sample Collected By : MSV Analytical Laboratories, Bellary.
4. Particulars of Sample Collected : Sample collected with VSS - 1
5. Date of Sample Receipt : 27.02.2023
6. Sample Code : 3068
7. Analysis Starting Date : 28.02.2023
8. Analysis Completion Date : 02.03.2023
9. Sample Tested as Received

GENERAL DETAILS

Date of Monitoring	27.02.2023
Fuel Used	----
Stack Temperature (°C)	150
Velocity (m/s)	7.12
Height (m)	60 mtrs AGL
Diameter (m)	4.6
Cross sectional area (m ²)	16.61
Flow/Discharge Rate of Gas Nm ³ /Hr	425747.52

RESULTS

Parameters	Protocol	Unit	Result	GSR 277 (E) Standards
Particulate Matter	IS-11255(Part1) - 1985	mg/Nm ³	21.8	50
Sulphur dioxide	IS-11255(Part2) - 1985	mg/Nm ³	30.7	800
Nitrogen dioxide	IS-11255(Part7) - 2005	mg/Nm ³	54.2	500
Carbon Monoxide as(CO)	IS 13270	%	0.26	Max 1%
Oxygen as O ₂	Instrument Method	%	6.2	---

INFERENCE	As per GSR 277 (E) Standards. Report Status :- The analyzed value for above measured parameter is within the limits.
-----------	---

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

Note : 1. The results listed only to the tested samples & applicable parameters, END OF REPORT:-

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/S/F/01/00

REPORT OF SOIL QUALITY DATA

Test Report No: MSVAL/2023/2335

Report Issued Date: 21.02.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasnakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Soil Sample- Inside The Plant
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Particulars of Sample Collected : Composite sample
5. Sample Quantity : 10 Kg
6. Date of Sampling : 17.02.2023
7. Date of sample Receipt : 17.02.2023
8. Sample Code : 2377
9. Analysis Starting Date : 18.02.2023
10. Analysis Completion Date : 20.02.2023
11. Sample tested as Received

Sl. No	Parameters	protocol	Unit	Result
1	pH	IS:2720 (Part-26);1987	--	7.2
2	Moisture	1S:2720 Part -2	%	4.18
3	Conductivity	1S:14767	mS/cm	1.520
4	Sulphur	MSVAL/SOP/S-05	Kg/ha	35.6
5	Available Nitrogen	MSVAL/SOP/S-07	Kg/ha	235.2
6	Available Potassium as K	MSVAL/SOP/S-11	Kg/ha	330.6
7	Available Phosphorous as P	MSVAL/SOP/S-06	Kg/ha	18.6
8	Extractable Magnesium	MSVAL/SOP/S-09	Meq/l	20.8
9	Extractable Calcium	MSVAL/SOP/S-08	Meq/l	124
10	Organic Carbon	IS:2720 (Part-23) ; 1972	%	0.68
11	Available Iron	MSVAL/SOP/S-10	mg/kg	2.26
12	Available Manganese	MSVAL/SOP/S-10	mg/kg	1.32
13	Available Zinc	MSVAL/SOP/S-10	mg/kg	0.52
14	Available Copper	MSVAL/SOP/S-10	mg/kg	0.14

Analysed by



END OF REPORT:-

Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

Note: 1. The results listed only to the tested samples & applicable parameters,

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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/S/F/01/00

REPORT OF SOIL QUALITY DATA

Test Report No: MSVAL/2023/2336

Report Issued Date: 21.02.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Soil Sample - Outside the plant
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Particulars of Sample Collected : Composite sample
5. Sample Quantity : 10 Kg
6. Date of Sampling : 17.02.2023
7. Date of sample Receipt : 17.02.2023
8. Sample Code : 2378
9. Analysis Starting Date : 18.02.2023
10. Analysis Completion Date : 20.02.2023
11. Sample tested as Received

Sl. No	Parameters	protocol	Unit	Result
1	pH	IS:2720 (Part-26);1987	--	6.85
2	Moisture	1S:2720 Part -2	%	4.26
3	Conductivity	1S:14767	mS/cm	1.610
4	Sulphur	MSVAL/SOP/S-05	Kg/ha	38.6
5	Available Nitrogen	MSVAL/SOP/S-07	Kg/ha	234.2
6	Available Potassium as K	MSVAL/SOP/S-11	Kg/ha	316.6
7	Available Phosphorous as P	MSVAL/SOP/S-06	Kg/ha	21.6
8	Extractable Magnesium	MSVAL/SOP/S-09	Meq/l	32.8
9	Extractable Calcium	MSVAL/SOP/S-08	Meq/l	144
10	Organic Carbon	IS:2720 (Part-23) ;	%	0.48
11	Available Iron	MSVAL/SOP/S-10	mg/kg	2.36
12	Available Manganese	MSVAL/SOP/S-10	mg/kg	1.22
13	Available Zinc	MSVAL/SOP/S-10	mg/kg	0.82
14	Available Copper	MSVAL/SOP/S-10	mg/kg	0.18

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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4. Total liability of our laboratory is limited to the invoice amount. Any dispute arising out of this report is subject to Bellary Jurisdiction only.

5. Sampling is not done by us unless otherwise specified. 6. The tests and/or calibrations marked with an are not accredited by NABL.



MSV Analytical Laboratories

Recognition by MoEF under Environment (Protection) Act, 1986

(Certified by ISO-14001-2015, ISO 22000-2018, ISO 45001-2018, ISO 9001-2015)

C.M.C Ward No 18 & C.T.C W.No.16 T.S No. 695/A/32/B1, Block No 19 (1st & 2nd Floor)

Sanganakallu Road, KEB Circle, Ballari - 583103 Contact No : Mob : 94498 03895, (O) : 08392-255169,

E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/S/F/01/00

REPORT OF SOIL QUALITY DATA

Test Report No: MSVAL/2023/2337

Report Issued Date: 21.02.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Soil Sample- Smiore colony
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Particulars of Sample Collected : Composite sample
5. Sample Quantity : 10 Kg
6. Date of Sampling : 17.02.2023
7. Date of sample Receipt : 17.02.2023
8. Sample Code : 2379
9. Analysis Starting Date : 18.02.2023
10. Analysis Completion Date : 20.02.2023
11. Sample tested as Received

Sl. No	Parameters	protocol	Unit	Result
1	pH	IS:2720 (Part-26);1987	--	6.5
2	Moisture	1S:2720 Part -2	%	7.52
3	Conductivity	1S:14767	mS/cm	1.350
4	Sulphur	MSVAL/SOP/S-05	Kg/ha	32.6
5	Available Nitrogen	MSVAL/SOP/S-07	Kg/ha	252.2
6	Available Potassium as K	MSVAL/SOP/S-11	Kg/ha	382.6
7	Available Phosphorous as P	MSVAL/SOP/S-06	Kg/ha	26.6
8	Extractable Magnesium	MSVAL/SOP/S-09	Meq/l	30.8
9	Extractable Calcium	MSVAL/SOP/S-08	Meq/l	154
10	Organic Carbon	IS:2720 (Part-23) ; 1972	%	0.48
11	Available Iron	MSVAL/SOP/S-10	mg/kg	2.61
12	Available Manganese	MSVAL/SOP/S-10	mg/kg	1.09
13	Available Zinc	MSVAL/SOP/S-10	mg/kg	0.48
14	Available Copper	MSVAL/SOP/S-10	mg/kg	0.14

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda

Chief executive of the laboratory

- Note: 1. The results listed only to the tested samples & applicable parameters,
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E-mail : msvbellary2018@gmail.com, labmsv@gmail.com Website : www.msvbellary.com

MSVAL/S/F/01/00

REPORT OF SOIL QUALITY DATA

Test Report No: MSVAL/2023/2338

Report Issued Date: 21.02.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyasanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Soil Sample - Kallahalli Village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Particulars of Sample Collected : Composite sample
5. Sample Quantity : 10 Kg
6. Date of Sampling : 17.02.2023
7. Date of sample Receipt : 17.02.2023
8. Sample Code : 2380
9. Analysis Starting Date : 18.02.2023
10. Analysis Completion Date : 20.02.2023
11. Sample tested as Received

Sl. No	Parameters	protocol	Unit	Result
1	pH	IS:2720 (Part-26);1987	--	6.10
2	Moisture	1S:2720 Part -2	%	6.56
3	Conductivity	1S:14767	mS/cm	1.325
4	Sulphur	MSVAL/SOP/S-05	Kg/ha	35.5
5	Available Nitrogen	MSVAL/SOP/S-07	Kg/ha	222.6
6	Available Potassium as K	MSVAL/SOP/S-11	Kg/ha	312.5
7	Available Phosphorous as P	MSVAL/SOP/S-06	Kg/ha	16.6
8	Extractable Magnesium	MSVAL/SOP/S-09	Meq/l	20.8
9	Extractable Calcium	MSVAL/SOP/S-08	Meq/l	132
10	Organic Carbon	IS:2720 (Part-23) ; 1972	%	0.58
11	Available Iron	MSVAL/SOP/S-10	mg/kg	2.45
12	Available Manganese	MSVAL/SOP/S-10	mg/kg	1.65
13	Available Zinc	MSVAL/SOP/S-10	mg/kg	0.32
14	Available Copper	MSVAL/SOP/S-10	mg/kg	0.15

Analysed by



Authorized Signatory

B.Chinnna Lingana Gouda
Chief executive of the laboratory

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E-mail : msvalbellary2018@gmail.com, labmsv@gmail.com Website : www.msvalbellary.com

MSVAL/S/F/01/00

REPORT OF SOIL QUALITY DATA

Test Report No: MSVAL/2023/2339

Report Issued Date: 21.02.2023

- 1 Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vyanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
- 2 Name of the sample : Soil Sample - Vyanakere village
- 3 Sample Collected By : MSV Analytical Laboratories, Bellary
- 4 Particulars of Sample Collected : Composite sample
- 5 Sample Quantity : 10 Kg
- 6 Date of Sampling : 17.02.2023
- 7 Date of sample Receipt : 17.02.2023
- 8 Sample Code : 2381
- 9 Analysis Starting Date : 18.02.2023
- 10 Analysis Completion Date : 20.02.2023
- 11 Sample tested as Received

Sl. No	Parameters	protocol	Unit	Result
1	pH	IS:2720 (Part-26);1987	--	6.23
2	Moisture	1S:2720 Part -2	%	8.52
3	Conductivity	1S:14767	mS/cm	1.850
4	Sulphur	MSVAL/SOP/S-05	Kg/ha	34.6
5	Available Nitrogen	MSVAL/SOP/S-07	Kg/ha	295.2
6	Available Potassium as K	MSVAL/SOP/S-11	Kg/ha	362.6
7	Available Phosphorous as P	MSVAL/SOP/S-06	Kg/ha	19.6
8	Extractable Magnesium	MSVAL/SOP/S-09	Meq/l	22.8
9	Extractable Calcium	MSVAL/SOP/S-08	Meq/l	154
10	Organic Carbon	IS:2720 (Part-23) ; 1972	%	0.98
11	Available Iron	MSVAL/SOP/S-10	mg/kg	2.76
12	Available Manganese	MSVAL/SOP/S-10	mg/kg	1.62
13	Available Zinc	MSVAL/SOP/S-10	mg/kg	0.82
14	Available Copper	MSVAL/SOP/S-10	mg/kg	0.64

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

:- END OF REPORT:-

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MSVAL/S/F/01/00

REPORT OF SOIL QUALITY DATA

Test Report No: MSVAL/2023/2340

Report Issued Date: 21.02.2023

1. Name of the Industry : M/s. The Sandur Manganese & Iron Ores Ltd.
(Metal & Ferro Alloys Plant)
Vysanakere, Hanumanahalli Village,
Hospet Taluk, Bellary District, Karnataka.
2. Name of the sample : Soil Sample – Gunda village
3. Sample Collected By : MSV Analytical Laboratories, Bellary
4. Particulars of Sample Collected : Composite sample
5. Sample Quantity : 10 Kg
6. Date of Sampling : 17.02.2023
7. Date of sample Receipt : 17.02.2023
8. Sample Code : 2382
9. Analysis Starting Date : 18.02.2023
10. Analysis Completion Date : 20.02.2023
11. Sample tested as Received

Sl. No	Parameters	protocol	Unit	Result
1	pH	IS:2720 (Part-26);1987	--	6.12
2	Moisture	1S:2720 Part -2	%	5.58
3	Conductivity	1S:14767	mS/cm	1.610
4	Sulphur	MSVAL/SOP/S-05	Kg/ha	35.5
5	Available Nitrogen	MSVAL/SOP/S-07	Kg/ha	213.2
6	Available Potassium as K	MSVAL/SOP/S-11	Kg/ha	323.6
7	Available Phosphorous as P	MSVAL/SOP/S-06	Kg/ha	19.6
8	Extractable Magnesium	MSVAL/SOP/S-09	Meq/l	26.8
9	Extractable Calcium	MSVAL/SOP/S-08	Meq/l	164
10	Organic Carbon	IS:2720 (Part-23) ; 1972	%	0.88
11	Available Iron	MSVAL/SOP/S-10	mg/kg	2.46
12	Available Manganese	MSVAL/SOP/S-10	mg/kg	1.22
13	Available Zinc	MSVAL/SOP/S-10	mg/kg	0.62
14	Available Copper	MSVAL/SOP/S-10	mg/kg	0.14

Analysed by



Authorized Signatory

B.Chinna Lingana Gouda
Chief executive of the laboratory

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